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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/807,862 | 03/24/2004 | Andrew Lee Thompson | 871-011717-US(PAR)/300206 | 5482 |

2512 7590 12/29/2004

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| EXAMINER |
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DUONG, THO V

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| ART UNIT | PAPER NUMBER |
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3743

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/807,862

Applicant(s)

THOMPSON ET AL.

Examiner

Tho v Duong

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/24/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamano (US 6,366,463). Hamano discloses (figures 6,8,9,11 and column 6, lines 36-43) a heat sink arrangement configured to receive an equipment module (16), the heat sink arrangement comprising alignment means (21-1,21-2) to engage with the heat sink arrangement and a pivotable heat sink (21), the heat sink (21) being pivoted by the insertion of the equipment module such that a surface of the heat sink is brought into contact with a surface of the equipment module; the heat sink arrangement further comprises an aperture (socket 18) for receiving the equipment module and the pivotable heat sink (21) has a surface, which is inclined (vertically in a complete open position shown in figure 11) such that the surface that make contact with the equipment module is presented towards the aperture (18); the heat sink arrangement further comprises one or more faces having one or more protrusions (21-6); the heat sink is a gas cooling apparatus; the surface of the pivotable heat sink that make contact with the equipment comprises a material (21-3) that increase the diffusion of heat from the equipment

Art Unit: 3743

module and the heat sink arrangement further comprises a heat pipe (22) for supporting the heat sink.

Claims 1-3 and 5-6 are rejected under 35 U.S.C. 102(a) as being anticipated by Yan et al. (US 6,447,322). Yan discloses (figures 1-3) a heat sink arrangement configured to receive an equipment module (12), the heat sink arrangement comprising alignment means (14) to engage with the heat sink arrangement and a pivotable heat sink (20), the heat sink (20) being pivoted by the insertion of the equipment module such that a surface of the heat sink is brought into contact with a surface of the equipment module; the heat sink arrangement further comprises an aperture (32) for receiving the equipment module and the pivotable heat sink (20) has a surface (42) which is inclined (vertically in a complete open position) such that the surface (42) that make contact with the equipment module is presented towards the aperture (32); the heat sink arrangement further comprises one or more faces having one or more protrusions (34,40); the heat sink is a gas cooling apparatus; the surface (42) of the pivotable heat sink comprises a material (22) that increase the diffusion of heat from the equipment module.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yan (US 6,447,322) in view of Garner et al. (US 5,822,187). Yan substantially discloses all of applicant's claimed invention as discussed above except for the limitation that a support structure such as a

Art Unit: 3743

pivot pin (44) is a heat pipe. Garner discloses a heat dissipating assembly that has a pivot pin (20) is a heat pipe for the purpose of transferring heat between hinged devices so that heat is further dissipated from the heat source. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Garner's teaching in Yan's device for the purpose of transferring heat between hinged devices so that heat is further dissipated from the heat source.

Allowable Subject Matter

Claims 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7-10 use means plus function format, it give rises to the interpretation under 35 USC 112, par. 6 in light of and consistent with the written description of the invention in the application.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Choy (US 6,155,859) discloses an IC socket having pressure cover.

Leavitt et al. (US 6,547,580) discloses a socket apparatus having a pivotal heat sink.

Gallagher et al. (US 6,086,387) discloses a cover assembly with a pivotal heat sink.

Lechner et al. (US 4,316,236) discloses a hinged support for electrical device.

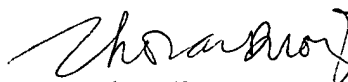
Conroy (US 6,741,089) discloses a hinged heat sink burn-in socket.

Art Unit: 3743

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F (first Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet can be reached on 571-272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tho v Duong
Examiner
Art Unit 3743



TD
December 24, 2004